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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/909,197	07/19/2001	Tomoyuki Narumi	0153-83085	9733
24628	7590	04/20/2005	EXAMINER	
WELSH & KATZ, LTD 120 S RIVERSIDE PLAZA 22ND FLOOR CHICAGO, IL 60606			GRAHAM, ANDREW R	
		ART UNIT	PAPER NUMBER	
		2644		

DATE MAILED: 04/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	09/909,197	NARUMI ET AL.
	Examiner Andrew Graham	Art Unit 2644

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 05 August 2004.  
 2a) This action is FINAL.                            2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 1-22 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) 1-22 is/are rejected.  
 7) Claim(s) \_\_\_\_\_ is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on 19 October 2001 is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) Notice of References Cited (PTO-892)  
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)  
 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
 Paper No(s)/Mail Date \_\_\_\_\_

4) Interview Summary (PTO-413)  
 Paper No(s)/Mail Date. \_\_\_\_\_  
 5) Notice of Informal Patent Application (PTO-152)  
 6) Other: \_\_\_\_\_

DETAILED ACTION

*Claim Objections*

1. **Claim 1** is objected to because of the following informalities:

As amended, Claim 1 recites "the signal processor" in the 13<sup>th</sup> and 14<sup>th</sup> lines of the claim; other references included in the claim and dependent claims refer to this component as "the audio signal processor". For purposes of clarity, the applicant is respectfully requested to amend this recitation starting in line 13 to read "the audio signal processor".

*Drawings*

2. The drawings, submitted 10/19/2001, are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: "57", in the amendment to the specification submitted. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next

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Office action. The objection to the drawings will not be held in abeyance.

**Claim Rejections - 35 USC § 102**

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-5, 7, 9, 11-15, 17, and 19-22 are rejected under 35 U.S.C. 102(e) as being anticipated by Hom et al (USPN 6331936 B1).

Hereafter, "Hom et al" will be referred to as "Hom".

Hom teaches an AC adaptor that may be used both internally and externally a data processing device.

Specifically regarding Claim 1, Hom teaches:

A method of providing power (via 10) to an audio signal processor (76) (computer system 60 in 76 includes data and program storage, along with components for executing computer programs; at least a subset of enabled functions comprises audio signal processing; col. 4, lines 18-40),

such method comprising the steps providing a receptacle (90) for a housing (18) of a voltage converting power supply (10) within an

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enclosure (82) of the audio signal processor (76) (col. 3, lines 48-51; col. 4, lines 38-63); and

removably disposing the voltage converting power supply (10) within the enclosure (82) of the audio signal processor (76) (col. 5, lines 14-15),

said voltage converting power supply (10) being adapted to supply power (DC via 28) from an alternating current power source (via 36) to the audio signal processor (76) when the voltage converting power supply (10) is disposed within the enclosure (82) (col. 3, lines 57-60; col. 4, lines 58-63) and

power from the alternating current power source to the signal processor (76) when the voltage converting power supply (10) is not disposed within the enclosure (82) (col. 4, lines 63-67).

Regarding Claim 2, Hom teaches:

disposing a receptacle (44) for a plug (42) of an external power source (AC power source, supplied via 34) within the housing (18) of the power supply (10) (col. 3, lines 49-65; Figure 1).

Regarding Claim 3, Hom teaches:

providing a set of external conductors (electrical contacts in 28, cord 24) for coupling the power supply (10) to the audio signal processor (76) (col. 3, lines 54-58; see conductor 28 illustrated in Figure 1).

Regarding Claim 4, Hom teaches:

disposing an electrical receptacle (84) in the enclosure (82) of the audio signal processor (76) for coupling power from the power

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supply (10) to the audio signal processor (76) (col. 4, lines 44-45 and 63-67).

Regarding Claim 5, Hom teaches:

disposing a plug (28) on an end of the external conductors (electrical contacts in cord 24) for engaging the electrical receptacle (84) in the enclosure (82) of the audio signal processor (76) (col. 4, lines 63-65).

Regarding Claim 7, Hom teaches:

providing an inner set of dimensions of the receptacle (90) that are complementary to an outer set of dimensions of the converting power supply 10 (Figure 7, adaptor 10 may be mounted within module bay 90; col. 5, lines 45-62).

Regarding Claim 9, Hom teaches:

preferentially separating noise sensitive signal processing components ("low power logic areas") from a transformer of the voltage converting power supply (10) (col. 1, lines 22-25; transformer inherent, as device 76 may also be battery powered, which outputs lower voltage than standard AC power source).

Regarding Claim 11, Hom teaches:

An apparatus (system comprising 10, 76 and interconnection) for providing power (from AC power source) to an audio signal processor (76) (computer system 60 in 76 includes data and program storage, along with components for executing computer programs; at least a subset of enabled functions comprises audio signal processing; col. 4, lines 18-40), such apparatus comprising:

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a voltage converting power supply (10) (col. 3, lines 47-51); and  
a receptacle (90) disposed within an enclosure (82) of the audio  
signal processor (76) (col. 4, lines 47-53),

said receptacle (90) being adapted to removably receive the  
voltage converting power supply (10) (col. 5, lines 14-15),  
said voltage converting power supply (10) and receptacle (90)  
being adapted to supply power from an alternating current power source  
("AC power source") to the audio signal processor (10) when the  
voltage converting power supply (10) is disposed within the enclosure  
(82) (col. 4, lines 58-63) and

to supply power from the alternating current power source ("AC  
power source") to the audio signal processor (76) when the voltage  
converting power supply (10) is not disposed within the enclosure  
(82) (used externally, col. 4, lines 63-67).

Regarding Claim 12, please refer to the above rejection of the  
similar limitations of Claim 2. Regarding Claim 13, please refer to  
the above rejection of the similar limitations of Claim 3. Regarding  
Claim 14, please refer to the above rejection of the similar  
limitations of Claim 4. Regarding Claim 15, please refer to the above  
rejection of the similar limitations of Claim 5. Regarding Claim 7,  
please refer to the above rejection of the similar limitations of  
Claim 17.

Regarding Claim 19, Hom teaches:

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An apparatus (system of 10, 76, and interconnections) for providing power (from "AC power source") to an audio signal processor (76), such apparatus comprising:

a voltage converting power supply (10) (col. 3, lines 47-51); and means (90) disposed within an enclosure (82) of the audio signal processor (76) for removably receiving the voltage converting power supply (10) (col. 4, lines 58-63; col. 5, lines 14-15) and

that allows the voltage converting power supply (10) to supply power from an alternating current power source ("AC power source") to the audio signal processor (76) while the voltage converting power supply (10) is disposed within the enclosure (82) (col. 4, lines 58-63) and

to supply power from the alternating current power source ("AC power source") to the audio signal processor (76) when the voltage converting power supply (10) is not disposed within the enclosure (82) (col. 4, lines 63-67).

Regarding Claim 20, Hom teaches:

means (44) disposed within the housing (wall 46 of 18) of the voltage converting power supply (10) for receiving power from an external source (AC) (col. 3, lines 62-65).

Regarding Claim 21, Hom teaches:

means (34) coupled to the means for receiving power (44, via 40) for coupling the power supply (10) to the external power source (AC) (col. 3, lines 60-65).

Regarding Claim 22, Hom teaches:

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means (84) disposed in the enclosure (82) of the audio signal processor (76) for coupling power from the power supply (10) to the audio signal processor (76) (col. 4, lines 44-45 and 63-65).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. **Claims 6 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hom as applied above, and in further view of Narita et al (USPN 5721481).** Hereafter, "Narita et al" will be referred to as "Narita".

As detailed above, Hom teaches an AC adaptor that may be used both internally and externally a data processing device.

Hom does not clearly specify functions comprising:

- defining the audio signal processor as being an audio amplifier.

Narita teaches an AC adaptor-connected system that comprises an audio amplifier.

Specifically regarding **Claim 6**, Narita teaches:

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defining the audio signal processor (part of 100, in view of Hom above) as being an audio amplifier (81) (col. 10, lines 27-38 and 61-65).

To one of ordinary skill in the art at the time the invention was made, it would have been obvious to incorporate an audio amplifier to be powered by the AC adaptor in the system of Hom as is disclosed for the system of Narita. The motivation behind the inclusion of an audio amplifier would have been the capability of providing an output speaker with an audio signal of the appropriate level or amplification.

Regarding Claim 16, please refer to the above rejection of the similar limitations of Claim 6.

5. Claims 8 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hom as applied above, and in further view of Chamberlain et al (USPN 5466545). Hereafter, "Chamberlain et al" will be referred to as "Chamberlain".

As detailed above, Hom teaches an AC adaptor that may be used both internally and externally a data processing device.

Hom does not clearly specify functions comprising:

- tapering the power supply and receptacle to prevent improper insertion

Chamberlain teaches a power-supplying component that is inserted into a receptacle during use and comprises a generally rectangular housing.

Specifically regarding **Claim 8**, Chamberlain teaches:

tapering (production of chamfers 74,76) the power supply (10, in view of adaptor of Hom above) and receptacle (R) to prevent improper insertion (col. 5, lines 15-40)

To one of ordinary skill in the art at the time the invention was made, it would have been obvious to at least include chamfers on the adaptor housing and a corresponding internal shape in the bay of Hom as is taught for the battery pack and corresponding receptacle of Chamberlain. The motivation behind such a modification would have been that such chamfers and receptacle shape would have permitted proper alignment of the adaptor as well as restricted movement of the battery pack.

Regarding **Claim 18**, please refer to the above rejection of the similar limitations of **Claim 8**.

6. **Claim 10** is rejected under 35 U.S.C. 103(a) as being unpatentable over Hom as applied above, and in further view of Ozias et al (USPN 6556431 B1). Hereafter, "Ozias et al" will be referred to as "Ozias".

As detailed above, Hom teaches an AC adaptor that may be used both internally and externally a data processing device. Hom notes the use of EMI filters in prior art, as well as the need for AC adaptor isolation (col. 1, lines 2-25 and col. 2, lines 10-22).

Hom does not clearly specify functions comprising:

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shielding the noise sensitive signal processing components from the transformer.

Ozias teaches the inclusion of a heat and EMI shielded AC adaptor in a computing system.

Specifically regarding Claim 10, Ozias teaches:

shielding (application of 28) the noise sensitive signal processing components (such as 16, in view of components in 76 of Hom) from the transformer (12).

To one of ordinary skill in the art at the time the invention was made, it would have been obvious to incorporate a shielding element, such as taught by Ozias into the AC adaptor of the system of Hom. The motivation behind such a modification would have been that such a shield would have been operable to limit electromagnetic radiation and contain heat produced by the operation of the AC adaptor.

#### *Conclusion*

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Tsai (USPN 5673173) also teaches an AC adaptor which may be housed inside a device or connected externally during the provision of power to the device.

#### *Conclusion*

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew Graham

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whose telephone number is 703-308-6729. The examiner can normally be reached on Monday-Friday, 8:30 AM to 5:00 PM (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sinh Tran can be reached at 571-272-7564. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
**SINH TRAN**  
**SUPERVISORY PATENT EXAMINER**

*AK*  
Andrew Graham  
Examiner  
A.U. 2644

ag  
April 18, 2005